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LABORATORY CORPORATION OF AMERICA HOLDINGS, dba LabCorp,

Petitioner,

v.

METABOLITE LABORATORIES, INC., *et al.*,

Respondents.

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

BRIEF OF INTERNATIONAL BUSINESS MACHINES CORPORATION AS AMICUS CURIAE IN SUPPORT OF NEITHER PARTY

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Gottschalk v. Benson,
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Lab. Corp. of Am. Holdings
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Le Roy v. Tatham,
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Loew's Drive-in Theatres, Inc.
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State Street Bank & Trust Co. v. Signature Fin. Group, Inc.,
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Cited Authorities

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Other Authorities:

ALEXANDER HAMILTON, THE REPORTS OF ALEXANDER HAMILTON: REPORT ON MANUFACTURES (Dec. 5, 1791) (Jacob E. Cooke ed., Harper & Row 1964) 9

Brief for the United States as Amicus Curiae, *Metabolite Labs., Inc. v. Lab. Corp. of Am.*, 370 F.3d 1354 (Fed. Cir. 2004), *cert. granted*, 126 S. Ct. 601 (U.S. Nov. 2, 2005) (No. 04-607) 6

Giles S. Rich, *Principles of Patentability*, 28 GEO. WASH. UNIV. L. REV. 393 (January 1960) 21-22, 24

H. R. Rep. No. 82-1923 (1952) 24

H.R. REP. NO. 97-312 (1981) 18

John R. Thomas, *The Patenting of the Liberal Professions*, 40 B.C. L. REV. 1139 (1999) 28

Joseph Barnes, *Treatise on the Justice, Policy, and Utility of Establishing an Effectual System for Promoting the Progress of Useful Arts* (Francis Bailey 1792) 9

Leo J. Raskind, *The State Street Bank Decision: The Bad Business of Unlimited Patent Protection for Methods of Doing Business*, 10 FORDHAM INTELL. PROP., MEDIA & ENT. L.J. 61 (1999). 26

Cited Authorities

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Malla Pollack, *The Multiple Unconstitutionality of Business Method Patents: Common Sense, Congressional Consideration, and Constitutional History*, 28 RUTGERS COMP. & TECH. L.J. 61 (2002) 28-29

Official Gazette of the United States Patent and Trademark Office, 1300 O.G. 142, No. 4 (Nov. 22, 2005) 25

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BRIEF OF INTERNATIONAL BUSINESS MACHINES CORPORATION AS AMICUS CURIAE IN SUPPORT OF NEITHER PARTY[1]

International Business Machines Corporation (IBM) respectfully submits this brief as *amicus curiae* in support of neither party.

INTEREST OF AMICUS CURIAE

IBM is a globally recognized leader in the field of information technology research, development, design, manufacturing, and related services. During IBM's nearly 100-year history, its employees have included five Nobel laureates, five National Medal of Science recipients, and eight winners of the National Medal of Technology. The United States Patent and Trademark Office (USPTO) has granted IBM tens of thousands of United States patents, including more patents than any other corporate assignee for the past twelve years. IBM is the proprietor of more patents claiming computer-related inventions than any other entity in the world. IBM is also ranked in the top two for patents issued on business methods, as classified by the USPTO.[2] IBM believes it can provide a balanced view on important issues implicated by this case — namely, the patentability standard under 35 U.S.C. § 101, and particularly as it relates to patenting of business methods.

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[1] In accordance with Supreme Court Rule 37.6, Amicus states that this brief was authored in its entirety by the counsel listed herein. No person or entity other than Amicus listed on the cover made a monetary contribution to the preparation or submission of this brief. Letters reflecting written consent of the parties to the submission of this brief have been filed with the Clerk of the Court.

[2] According to information available to IBM, it has been issued 308 patents on business methods as of December 13, 2005.

As a leading recipient, licensee, and licensor of patents, amicus IBM is committed to maintaining the integrity of the United States patent laws. IBM is particularly interested in assuring that the statutory standard (35 U.S.C. § 101) for patent eligibility of business methods is addressed in a manner that is both rational and consistent with established principles of patent law.

INTRODUCTION AND SUMMARY OF ARGUMENT

Since this Court last interpreted section 101 of the patent statute, *see Diamond v. Diehr*, 450 U.S. 175, 191-93 (1981), certain decisions of the Federal Circuit Court of Appeals have broadened the scope of subject matter deemed eligible for patenting, particularly in the area of business methods. Under the standard currently followed by the Federal Circuit, an invention is eligible for patenting if "it merely achieves a useful, concrete, and tangible result." *State Street Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368, 1373 (Fed. Cir. 1998). Under this lenient standard, the section 101 inquiry has taken an "end-justifies-the-means" approach, which has resulted in patents arising from a diverse range of human behavior traditionally outside the realm of patent protection, including economic analyses, artistic techniques, athletic skills, and abstract methods of doing business. As one Federal Circuit jurist remarked, under that court's case law, "virtually anything is patentable." *Hughes Aircraft Co. v. United States*, 148 F.3d 1385, 1385 (Fed. Cir. 1998) (Clevenger, J., dissenting from denial of rehearing) (*citing State Street*, 149 F.3d 1368).

Despite the significance of the issues surrounding subject matter eligibility under section 101, particularly for business methods, IBM believes that the facts of this case do not present a suitable opportunity for analyzing and articulating the proper scope of subject matter for patent eligibility. The

present matter before the Court involves a medical diagnostic procedure, rather than an inchoate business method or other abstract technique. Moreover, the parties did not squarely address the section 101 issue below and the resulting record is thus not sufficiently developed with respect to the statutory subject matter inquiry. IBM therefore respectfully suggests that the Court not speak broadly to the issue of patentable subject matter, but rather await a more appropriate case to address this issue. Should, however, the Court decide to address the scope of subject matter eligibility for business methods, IBM wishes to provide its view on section 101 for the Court's consideration.

As a general matter, a robust notion of patentable subject matter best serves the United States in the twenty-first century. Within our innovation-driven economy, diverse industries have contributed numerous technical advances that are unquestionably suitable for patenting. The USPTO has, for example, appropriately awarded patents in the pharmaceutical, biotechnology, computer/electronics, biomedical, financial, mechanical and other important fields.

Unfortunately, decisions of the Federal Circuit (like *State Street*) have unduly expanded the scope of patent-eligible subject matter for business methods. This broad scope stands at odds with the Constitution and this Court's consistent statements that an invention must contribute to the "Progress of [the] . . . useful Arts" in order to be eligible for patenting. In that constitutional context, patentable advances must be tied to a particular machine or apparatus, or alternatively, must reside in the physical transformation of an article to a "different state or thing." *See Gottschalk v. Benson*, 409 U.S. 63, 70-71 (1972). The *State Street* standard overlooks this Court's precedent and fails to apply an important constraint upon the patent system without any doctrinal justification or alternative tempering principle.

In the absence of a compelling rationale to alter the understanding of "useful arts," IBM believes that this Court should reaffirm its existing standard for subject matter patentability which is restricted to inventions that involve technological contributions — namely, tangible products or processes that either (i) are tied to a particular machine or apparatus or (ii) cause transformation or reduction of an article to a different state or thing, and in either instance produce technologically beneficial results. IBM recognizes that the Court has previously used language suggesting that this standard may not be a rigid rule, but rather more akin to a presumption. In the intervening years, however, no situation has been presented to this Court which warrants any exception to this rule. This test sets forth a reasonable and balanced standard for subject matter eligibility.

The long-standing principles governing subject matter eligible for patenting should be maintained such that, for example, a method of painting a surface using the posterior of an infant (U.S. Pat. No. 6,213,778) and a method for making jury selection determinations (U.S. Pat. No. 6,607,389) are not patentable subject matter because they do not produce technologically beneficial results. IBM recognizes that some of its own business method patents may include claims that might not satisfy this standard.

The Federal Circuit accomplished its shift in patent policy without any evidence suggesting that incentives for innovation are currently needed with respect to abstract business methods and other non-technological innovations, and without due consideration of the impact that such a shift would have on the economy. Although no persuasive justification prompted the abrupt allowance — indeed explosion — of patents for abstract business methods, the breadth of coverage of such patents has raised significant concerns within the innovation community. Among them is concern that such patents, because they are not restricted to

a specific technological contribution, may effectively appropriate all conceivable solutions to a particular problem. Such an overbroad monopoly thwarts progress of the useful arts by precluding legitimate attempts to design around a patent and by providing unjustified rewards beyond the contribution of the inventor. As a result, should this Court speak to the issue of statutory subject matter beyond the facts of this case, IBM respectfully suggests that the Court should reaffirm, consistent with its precedent on section 101, that a technological contribution is required for subject matter patentability, thereby denying patents on abstract or non-technological business methods.

I. DIVERSE INDUSTRIES HAVE MADE TECHNICAL CONTRIBUTIONS THAT APPROPRIATELY FALL WITHIN THE SCOPE OF PATENTABLE SUBJECT MATTER

Throughout our history, the constitutional and statutory standard for patent-eligible subject matter has been sufficiently flexible to adapt to new technological innovations. For example, during the Industrial Revolution, the Court in *Cochrane v. Deener*, 94 U.S. 780, 781, 791 (1877), held that an improved method for manufacturing flour was patentable. More recently, in *Diamond v. Chakrabarty*, 447 U.S. 303, 318 (1980), the Court held that a new life form, a microbe capable of digesting petrochemicals, was patentable. At the dawn of the Information Age, the Court held that a claim directed to a chemical process which included a programmed digital computer was patentable. *Diehr*, 450 U.S. at 191-93. The USPTO has heeded the Court's direction, allowing patents on, *inter alia*, new pharmaceutical, biotechnology and financial services inventions.[3] IBM fully supports a robust scope of patentable subject matter for these

[3] *See, e.g.*, U.S. Patent Nos. 6,969,531 ("Sodium Hyaluronate Microsphere), 6,967,096 ("Thermostable Peptisade") and 6,606,606 ("Systems and Methods for Performing Integrated Financial Transaction").

and other important innovations which are rooted in technological contributions. Further, IBM recognizes that the patent system's ability to adapt to new technologies is consistent with the constitutional requirement of promoting the useful arts and, in particular, that a measured evolution of the scope of patentable subject matter is an important incentive for pioneering innovations.

Turning to the recent burst of business method patents and the significance of the issues surrounding subject matter eligibility of business methods, IBM believes that the facts of this case do not present a suitable predicate for broadly analyzing and articulating the proper scope of subject matter patentability under section 101. First, while IBM expresses no view on the merits of this case, the present matter before the Court involves a medical diagnostic procedure,[4] rather than an inchoate business method or other abstract technique. Second, the petitioner failed to preserve the issue of patentable subject matter in the lower courts or develop a complete record for its review. The petitioner did not, either at trial or on appeal, challenge the validity of the patent as being directed to non-statutory subject matter.[5]

While the question on which certiorari was granted is narrower than that posed to the Government,[6] IBM submits

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[4] The patent is directed to methods for assaying samples of body tissues to determine total homocysteine levels and methods for diagnosing vitamin B deficiency based on the elevated homocysteine levels. U.S. Patent No. 4,940,658, col. 3, ll. 6-62.

[5] *See* Brief for the United States as Amicus Curiae at 9-12, *Metabolite Labs., Inc. v. Lab. Corp. of Am.*, 370 F.3d 1354 (Fed. Cir. 2004), *cert. granted*, 126 S. Ct. 601 (U.S. Nov. 2, 2005) (No. 04-607).

[6] When the petition for certiorari was pending, this Court asked for the Government's views on the following question: "Is the patent invalid because one cannot patent 'laws of nature, natural phenomena, and abstract ideas'? *Diamond v. Diehr*, 450 U.S. 175, 185 (1981)." *Lab. Corp. of Am. Holdings v. Metabolite Labs., Inc.*, 125 Sup. Ct. 1413 (2005).

this brief to address the subject of patent eligibility under section 101, particularly for business methods, in the event the Court decides to undertake a broad review of subject matter patentability.

II. THE SCOPE OF PATENTABLE SUBJECT MATTER HAS BEEN EXPANDED BEYOND THE LIMITS ESTABLISHED BY THE CONSTITUTION AND THIS COURT'S PRECEDENT

A. The Constitution And This Court's Precedent Establish Limits Upon The Subject Matter Eligible For Patenting

Article I, Section 8 of the Constitution provides:

> The Congress shall have Power ... To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.

U.S. CONST. art. I, § 8, cl. 8. *See* THE FEDERALIST No. XLIII, at 294 (James Madison) (M. Walter Dunne 1901) ("The right to useful inventions . . . belong to the inventors."). Historical context confirms that the Constitution restricts the scope of patent eligible subject matter. For example, the English Statute of Monopolies of 1623, upon which the United States patent system is largely based, provided an exception to the general prohibition against monopolies by granting a "privilege for the term of fourteen years or under [for] the sole working or making any manner of new manufactures . . . to the . . . inventor . . . ." Statute of Monopolies, 1623, 21 Jac. 1, c.3 (Eng.), *reprinted in* 9 DONALD S. CHISUM, CHISUM ON PATENTS, App. 8-3 (2005). Notably, that Statute eliminated

commercial practices from the scope of patentable exclusivity:

> [T]hose who formulated the Constitution were familiar with the long struggle over monopolies so prominent in English history, where exclusive rights to engage even in *ordinary business activities* were granted so frequently by the Crown for the financial benefits accruing to the Crown only. It was desired that in this country any Government grant of a monopoly for even a limited time should be *limited to those things which serve in the promotion of science and the useful arts.*

In re Yuan, 188 F.2d 377, 380 (C.C.P.A. 1951) (emphasis added). Contemporaneous use of the term "useful art" by the Founding Fathers further confirms that patent-eligible subject matter is limited to technological or industrial innovations. The term "useful arts" was used in the context of the production of goods and the industrial, mechanical and manual arts, days before the Constitutional Convention of 1787 by a delegate to that Convention.[7] Likewise,

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[7] "Under all the disadvantages which have attended manufactures and *the useful arts*, it must afford the most comfortable reflection to every patriotic mind to observe their progress in the United States and particularly in Pennsylvania. . . . Permit me however to mention them under their general heads: meal of all kinds, ships and boats, malt and distilled liquors, potash, gunpowder, cordage, loaf-sugar, pasteboard, cards and paper of every kind, books in various languages, snuff, tobacco, starch, cannon, musquets, anchors, nails, and very many other articles of iron, bricks, tiles, potters ware, mill-stones, and other stone work, cabinet work, trunks and Windsor chairs, carriages and harness of all kinds . . . ." Tench Coxe, Delegate to the 1787 Constitutional Convention from Pennsylvania, An Address to an Assembly of the Friends of American

(Cont'd)

Alexander Hamilton praised the patent system as a way of encouraging manufacturing industries and "[inventions] which relate to machinery" in the United States. ALEXANDER HAMILTON, THE REPORTS OF ALEXANDER HAMILTON: REPORT ON MANUFACTURES (Dec. 5, 1791) 115-16, 175-76 (Jacob E. Cooke ed., Harper & Row 1964).

Consistent with the constitutional foundation, the current patent statute, 35 U.S.C. § 101, provides:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

This Court has long held that the first three categories enumerated in section 101 — machines, manufactures and compositions of matter — refer to physical products. The Court has defined the term "machine" in section 101 to mean "a concrete thing, consisting of parts, or of certain devices and combination of devices." *Burr v. Duryee*, 68 U.S. (1 Wall.) 531, 570 (1864). "'Manufacture'" in section 101 means "'the production of articles for use from raw or prepared materials by giving to these materials new forms,

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Manufactures: Convened for the Purpose of Establishing a Society for the Encouragement of Manufactures and the Useful Arts, Read in the University of Pennsylvania, on Thursday the 9th of August 1787, 17-18 (R. Aitkin & Son 1787) (emphasis added); *see also* Joseph Barnes, *Treatise on the Justice, Policy, and Utility of Establishing an Effectual System for Promoting the Progress of Useful Arts* 4 (Francis Bailey 1792) (Patentable invention "consists in discoveries in science, and in the useful arts; by means of which agriculture, navigation, manufactures, and manual labor are, not only facilitated, but much promoted; and, indeed, to these they owe their present state of perfection.").

qualities, properties, or combinations, whether by hand-labor or by machinery.'" *Chakrabarty*, 447 U.S. at 308. "[C]omposition of matter" has been defined as "all compositions of two or more substances and . . . all composite articles, whether they be the results of chemical union, or of mechanical mixture, or whether they be gases, fluids, powders or solids." *Id.*

The fourth section 101 category — "process" — is defined in the patent statute as:

> process, art or method, and includes a new use of a known process, machine, manufacture, composition of matter, or material.

35 U.S.C. § 100(b). Although the meaning of the terms "process, art or method" is broad on its face, this Court's precedent "forecloses a purely literal reading of § 101." *Parker v. Flook*, 437 U.S. 584, 589 (1978); *see also Diehr*, 450 U.S. at 183 ("A process is a mode of treatment of certain materials to produce a given result. It is an act, or a series of acts, performed upon the subject-matter to be transformed and reduced to a different state or thing."). In particular, this Court has consistently distinguished between concrete, specific and technologically-grounded aspects of innovative contributions, which are protectable via the patent system, from underlying abstract or general principles, which are not.

In an early landmark decision regarding patentable subject matter, *O'Reilly v. Morse*, 56 U.S. (15 How.) 62, 113 (1854), the Court revoked Morse's eighth claim, which recited:

> *I do not* propose to *limit myself to* the *specific machinery* or parts of machinery described in the foregoing specification and claims; *the essence*

> *of my invention being the use of* the motive power of the electric or galvanic current, which I call *electro-magnetism, however developed for marking or printing intelligible characters, signs, or letters, at any distances*, being a new application of that power of which I claim to be the first inventor or discoverer.

Id. at 112 (emphasis added). The Court reasoned that the claim was "not warranted by law" because it would protect, and thereby prevent use of, all conceivable solutions to accomplish the recited result. *Id.* at 113.

> *If this claim can be maintained, it matters not by what process or machinery the result is accomplished.* For aught that we now know some future inventor, in the onward march of science, may discover a mode of writing or printing at a distance by means of the electric or galvanic current, without using any part of the process or combination set forth in the plaintiff's specification. . . . But yet if it is covered by this patent the inventor could not use it, nor the public have the benefit of it without the permission of this patentee.

Id. at 112-13 (emphasis added). The Court explained that Morse was only entitled to a patent for the method of using electro-magnetism to print marks or signs at a distance that he actually invented: "he has not discovered that the electro-magnetic current, used as a motive power, *in any other method, and with any other combination*, will do as well." *Id.* at 117 (emphasis added).

Twenty years later, in *Rubber-Tip Pencil Co. v. Howard*, 87 U.S. (20 Wall.) 498, 507 (1874), the Court invalidated a

claim reciting a rubber eraser having a hole to accept a pencil, explaining "an idea of itself is not patentable, but a new device by which it may be made practically useful is."

O'Reilly and *Rubber-Tip Pencil* are bedrock cases for determining the patent eligibility of subject matter. In the first instance, both cases confirm that the patent system does not protect all types of processes nor does it protect abstract ideas. These cases also reinforce the important policy goal of maintaining "basic tools of scientific and technological work" within the public domain. *See Gottschalk*, 409 U.S. at 67. *O'Reilly* in particular makes clear that process patents should not be allowed to appropriate all solutions to a problem. This Court has consistently applied the fundamental principles announced in *O'Reilly* and *Rubber-Tip Pencil* in the intervening years.

Notably, in a trilogy of cases decided at the dawn of the Information Age, the Court considered computer-related inventions and confirmed its early precedent as applied to new fields of endeavor. In *Gottschalk v. Benson*, 409 U.S. at 64, the patent claimed a "method for converting binary-coded decimal (BCD) numerals into pure binary numerals." "The claims were not limited to any particular art or technology, to any particular apparatus or machinery, or to any particular end use." *Id.* The claims "purported to cover any use of the claimed method in a general-purpose digital computer of any type." *Id.*

The question presented to the Court in *Gottschalk* was "whether the method described and claimed was a 'process' within the meaning of the Patent Act." *Id.* After reviewing a number of early decisions, the Court held that the claimed method was not patentable. *Id.* at 71-73. Much as "one may not patent an idea," one may not patent the "formula for converting BCD numerals to pure binary numerals." *Id.* at

71. "[T]he mathematical formula involved here has no substantial practical application except in connection with a digital computer, which means that if the judgment below is affirmed, the patent would wholly pre-empt the mathematical formula and in practical effect would be a patent on the algorithm itself." *Id.* at 71-72.

In reaching its decision, the Court acknowledged that the "[t]ransformation and reduction of an article 'to a different state or thing' is the clue to the patentability of a process claim that does not include particular machines." *Id.* at 70. *See, e.g., Expanded Metal Co. v. Bradford*, 214 U.S. 366, 385-86 (1909) (sustaining a patent on a process for expanding metal that involved mechanical operations).

Parker v. Flook, 437 U.S. at 585 involved claims drawn to a method for computing an "alarm limit" on any process variable involved in the catalytic chemical conversion of hydrocarbons. When a process variable, such as temperature, pressure, or flow rate, exceeded a predetermined "alarm limit," an alarm signaled "an abnormal condition indicating either inefficiency or perhaps danger." *Id.* The only difference between the claimed method and the previous conventional methods was the mathematical algorithm or formula used to calculate the alarm limit. *See id.* at 585-86.

The Court held that the claim was ineligible for patenting because it simply provided a formula for computing an updated alarm limit. *Id.* at 594-96. The application did not explain how to "select the appropriate margin of safety, the weighing factor, or any other variables, . . . [n]or [did] it . . . contain any disclosure relating to the chemical processes at work, the monitoring of process variables, or the means of setting off an alarm or adjusting an alarm system." *Id.* at 586.

Following the *Gottschalk* decision, the Court in *Parker* confirmed that a process does not automatically fall within the patentable subject matter of section 101 merely because a process implements a principle or mathematical formula in some specific fashion. *See Parker*, 437 U.S. at 593. To permit otherwise "would make the determination of patentable subject matter depend simply on the draftsman's art and would ill serve the principles underlying the prohibition against patents for 'ideas' or phenomena of nature." *Id.* "The rule that the discovery of a law of nature cannot be patented rests, not on the notion that natural phenomena are not processes, but rather on the more fundamental understanding that they are not the kind of 'discoveries' that the statute was enacted to protect." *Id.* An inventive application of a mathematical formula, principle or phenomenon of nature may be patented, but patentability cannot be supported "unless there is some other inventive concept in its application." *Id.* at 594.

Furthermore, the Court stated that "post-solution activity" — the adjustment of the alarm limit to the figure computed according to the formula — cannot "transform an unpatentable principle into a patentable process." *Id.* at 590. "A competent draftsman could attach some form of post-solution activity to almost any mathematical formula . . . [however, the] concept of patentable subject matter under § 101 is not 'like a nose of wax which may be turned and twisted in any direction . . . .'" *Id.* (*quoting White v. Dunbar*, 119 U.S. 47, 51 (1886)).

In *Diamond v. Diehr*, 450 U.S. at 177, the invention was "a process for molding raw, uncured synthetic rubber into cured precision products." According to the patent, the industry had been unable "to obtain uniformly accurate cures because the temperature of the molding press could not be precisely measured, thus making it difficult to . . . determine

cure time." *Id.* at 178. To overcome this problem, the method required, *inter alia*, constantly measuring the actual temperature inside the mold and then automatically feeding the temperature measurements into a computer which would repeatedly recalculate the cure time by use of a well-known equation. *See id.*

This Court held the claims to be patentable because "a physical and chemical process for molding precision synthetic rubber products falls within the § 101 categories of possibly patentable subject matter." *Id.* at 184. Here, the "claims were not directed to a mathematical algorithm or an improved method of calculation but rather recited an improved process for molding rubber articles by solving a practical problem which had arisen in the molding of rubber products." *Id.* at 181. "[T]he transformation of an article, in this case raw, uncured synthetic rubber, into a different state or thing cannot be disputed." *Id.* at 184. In fact, "[i]ndustrial processes such as this are the types which have historically been eligible to receive the protection of our patent laws." *Id.*

The Court further stated, "[a] claim drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula, computer program, or digital computer." *Id.* at 187. Rather, "when a claim containing a mathematical formula implements or applies that formula in a structure or process which, when considered as a whole, is performing a function which the patent laws were designed to protect (*e.g.*, transforming or reducing an article to a different state or thing), then the claim satisfies the requirements of § 101." *Id.* at 192.

On the other hand, "laws of nature, natural phenomena, and abstract ideas" are excluded from patent protection. *Id.* at 185. Scientific truths, or the mathematical expression

of them, are similarly outside the patent system, but "'a novel and useful structure created with the aid of knowledge of scientific truth may be [patentable].'" *Id.* at 188 (*quoting Mackay Radio & Telegraph Co. v. Radio Corp of Am.*, 306 U.S. 86, 94 (1939)).

In these and other relevant patent cases, the Court has developed several cogent principles that constrain subject matter patentability:

- "Excluded from . . . patent protection are laws of nature, natural phenomena, and abstract ideas." *Diehr*, 450 U.S. at 185.

- "A principle, in the abstract, is a fundamental truth; an original cause; a motive; these cannot be patented, as no one can claim in either of them an exclusive right." *Le Roy v. Tatham*, 55 U.S. (14 How.) 156, 175 (1853).

- One may not patent an idea. *Gottschalk*, 409 U.S. at 71 (*citing Rubber-Tip Pencil*, 87 U.S. at 507).

- "Phenomena of nature, though just discovered, mental processes, and abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work." *Gottschalk*, 409 U.S. at 67.

- Mathematical algorithms are not patentable. *See Diehr*, 450 U.S. at 186; *Parker*, 437 U.S. at 586; *Gottschalk*, 450 U.S. at 71-72.

- One cannot patent all solutions to a problem. *See O'Reilly*, 56 U.S. at 113.

- "'It is for the discovery or invention of some practical method or means of producing a beneficial result or effect, that a patent is granted, and not for the result or effect itself.'" *Diehr*, 450 U.S. at 182 n.7 (*quoting Corning v. Burden*, 55 U.S. (15 How.) 252, 267-68 (1854)).

- Insignificant post-solution activity or limiting an abstract idea to one technological environment will not render an abstract idea patentable. *See Diehr*, 450 U.S. at 191-92; *Parker*, 427 U.S. at 590.

- "A claim covers and secures a process, a machine, a manufacture, a composition of matter, or a design, but *never the function or result* of either, nor the scientific explanation of their operation." *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 373 (1996) (emphasis added).

B. The Gravamen Of This Court's Precedent Is That Subject Matter Patentability Is Restricted To Inventions That Involve Technological Contributions

IBM believes a comprehensive understanding of subject matter patentability can be deduced directly from this Court's precedent. More specifically, patentable subject matter is restricted to inventions that involve technological contributions — namely, tangible products or processes that either (i) are tied to a particular machine or apparatus or (ii) cause transformation or reduction of an article to a different state or thing, and in either instance produce technologically beneficial results. In summarizing this Court's existing standard, IBM recognizes that the Court has used language suggesting that it may not be a definitive rule,

but rather more akin to a presumption.[8] In the intervening years, however, no situation has been presented to this Court to justify an exception to this Court's standard. This test sets forth a reasonable and balanced standard for subject matter eligibility.

The requirement for technological contribution is also consistent with numerous cases of this Court, referring to patents as properly directed toward "technology" and "technological growth and industrial innovation." *See, e.g., Gottschalk*, 409 U.S. at 64 ("The claims were not limited to any particular art or *technology*, to any particular apparatus or machinery, or to any particular end use.") (emphasis added); *Diehr*, 450 U.S. at 184 ("*Industrial processes* . . . have historically been eligible to receive the protection of our patent laws.") (emphasis added); *Pfaff v. Wells*, 525 U.S. 55, 63 (1998) ("the patent system represents a carefully crafted bargain that encourages both the creation and the public disclosure of new and useful advances in *technology*, in return for an exclusive monopoly for a limited period of time.") (emphasis added); *Bonito Boats v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 150-51 (1989) (same); *Markman*, 517 U.S. at 390 ("Congress created the Court of Appeals for the Federal Circuit as an exclusive appellate court for patent cases, H.R. Rep. No. 97-312, pp. 20-23 (1981), observing that increased uniformity would 'strengthen the United States patent system in such a way as to foster *technological growth and industrial innovation*.'") (emphasis added). IBM has been unable to find any cases from this Court that are inconsistent with the technological contribution requirement.

[8] The *Gottschalk* Court stated: "It is argued that a process patent *must* either be tied to a particular machine or apparatus or *must* operate to change articles or materials to a 'different state or thing.' We do not hold that no process could ever qualify if it did not meet the requirements of our prior precedents." *Gottschalk*, 409 U.S. at 71 (emphasis added). However, the Court has not undertaken to define circumstances where a process outside its precedent would qualify for patent protection.

Until recent years, lower courts had also recognized that patenting was confined to the "technological arts," a modern term recognized as synonymous with the phrase "useful arts" as it appears in the Constitution. *In re Waldbaum*, 457 F.2d 997, 1003 (C.C.P.A. 1972); *In re Bergy*, 596 F.2d 952, 959 (C.C.P.A. 1979) ("We have previously pointed out that the present day equivalent of the term 'useful arts' employed by the Founding Fathers is '*technological arts.*'") (emphasis added), *aff'd sub nom, Diamond v. Chakrabarty*, 447 U.S. 303 (1980); *In re Musgrave*, 431 F.2d 882, 893 (C.C.P.A. 1970) ("All that is necessary, in our view, to make a sequence of operational steps a statutory 'process' within 35 U.S.C. § 101 is that it be in the *technological arts* so as to be in consonance with the Constitutional purpose to promote the progress of 'useful arts.'") (emphasis added).

This test is rooted in the constitutional requirement that patents are granted to promote the progress of useful arts. In historical context, the useful arts required a technological contribution. This Court's precedent reinforces the need for a technological contribution for patent eligibility. A fair reading of this Court's precedent in the aggregate provides the foundation for the standard that a claim to a process or method is not patentable unless it either (i) is tied to a particular machine or apparatus or (ii) causes transformation or reduction of an article to a different state or thing, and in either instance produces technologically beneficial results.

C. The Decisions Of The Federal Circuit Have Applied An Unjustifiably Expansive Standard For Patent Eligibility Of Business Methods

A specific, and particularly troubling, arena where Federal Circuit rulings diverge from this Court's precedent is the eligibility of business methods for patenting. IBM is concerned over patenting methods of doing business lacking a technical contribution.[9]

Historically, methods of doing business were not patentable subject matter,[10] and the 1952 Patent Act did not

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[9] Examples of abstract business methods include U.S. Patent Nos. 5,947,526 (claim 1 reciting method for tracking personal expenditures) and 5,668,736 (claim 1 reciting method for remodeling an existing building).

[10] *See, e.g., Hotel Security Checking Co. v. Lorraine Co.*, 160 F. 467, 469-72 (2d Cir. 1908) ("cash-registering and account-checking" unpatentable "system of transacting business disconnected from the means for carrying out the system . . . ."); *Ex Parte Turner*, 1894 Dec. Comm'r Pat. 36, 36-37 (method to secure reading of advertisements not patentable because, *inter alia*, process carried no physical effect; "a plan or theory of action which, if carried into practice, could produce no physical results proceeding direct from the operation of the theory or plan itself is not an art within the meaning of the patent laws."); *Ex Parte Abraham*, 1869 Dec. Comm'r Pat. 59 (method for detecting and preventing tax evasion by employing stamps to be severed upon attachment to an article unpatentable; "[i]t is contrary . . . to the spirit of the law . . . to grant patents for methods of book-keeping . . . ."); *Loew's Drive-in Theatres, Inc. v. Park-In Theatres, Inc.*, 174 F.2d 547, 553 (1st Cir. 1949) (patent claiming arranging automobiles such that occupants would have an unobstructed view of a screen or stage did "not involve an exercise of the faculty of invention"); *Seagram & Sons, Inc. v. Marzall*, 180 F.2d 26, 27-28 (D.C. Cir. 1950) (method for testing beverages and like products to make advance determination of

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change this principle. "Although the term 'process' was not added to 35 U.S.C. § 101 until 1952, a process [as shaped by this Court's precedent] has historically enjoyed patent protection because it was considered a form of 'art' as that term was used in the 1793 Act." *Diehr*, 450 U.S. at 182 (*citing Corning*, 56 U.S. (How. 15) at 267-68). In an oft-quoted comment, Judge Rich explained that:

> Section 101, entitled "Inventions patentable," enumerates the categories of inventions subject to patenting. Of course, not every kind of an invention can be patented. Invaluable though it may be to individuals, the public, and national defense, the invention of a more effective organization of the materials in, and the techniques of teaching a course in physics, chemistry, or Russian is not a patentable invention because it is outside of the enumerated [statutory] categories.... Also outside that group is one of the greatest inventions of our times, the diaper service.

(Cont'd)

consumer reactions and preferences not "new and useful art, machine, manufacture, or any new and useful improvements thereof"); *In re Patton*, 127 F.2d 324, 327-28 (C.C.P.A. 1942) (system of fighting fires using standardized and interchangeable fire fighting equipment not patentable subject matter; "a system of transacting business, apart from the means for carrying out such system, is not within . . . [the patent statute] . . . nor is an abstract idea or theory, regardless of its importance or the ingenuity with which it was conceived, apart from the means for carrying such idea or theory into effect, patentable subject matter."); *In re Wait*, 73 F.2d 982, 982-83 (C.C.P.A. 1934) (method of buying and selling stocks, wherein one party advertised offer, another party accepted offer and such transaction was recorded, constituted unpatentable method of doing business); *In re Sterling*, 70 F.2d 910, 911-12 (C.C.P.A. 1934) (patent application directed to a particular arrangement of printed matter on bank checks and stubs not patentable subject matter).

Giles S. Rich, *Principles of Patentability*, 28 GEO. WASH. UNIV. L. REV. 393, 393-94 (1960).[11]

The dicta in the Federal Circuit decision in *State Street*, however, created a dramatic sea-change in the patentability of inchoate business methods. *State Street* involved a patent generally directed to a data processing system for implementing an investment structure which was developed for use in Signature's business as an administrator and accounting agent for mutual funds. 149 F.3d at 1370.

The district court invalidated the patent for failure to claim statutory subject matter under section 101. *Id.* The Federal Circuit reversed the district court, ruling that the claims were directed to patentable subject matter because they produced a "useful, concrete and tangible result." *Id.* at 1375.

> [T]he transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price, constitutes a practical application of a mathematical algorithm, formula, or calculation, because it produces "a useful, concrete and tangible result" — a final share price momentarily fixed for recording and reporting purposes and even accepted and relied upon by regulatory authorities and in subsequent trades.

Id. at 1373.

While the Federal Circuit's holding in *State Street* regarding the claim at issue can be justified, IBM believes

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[11] Judge Rich was one of the principle drafters of the 1952 Patent Act as well as a Judge of the Court of Customs and Patent Appeals and the Court of Appeals for the Federal Circuit from 1957 to 1999.

that dicta in the decision ignited the explosion of non-technological business method patents seen today. The Federal Circuit concluded that the claim was drawn to a system, not a method of doing business, and it included a number of structural elements as limitations — thus, the claimed invention was a machine that implemented a process. However, the expansive dicta in *State Street* are inconsistent with this Court's precedent. *See, e.g., id.* at 1375 ("We take this opportunity to lay this ill-conceived exception [i.e., that business methods are not patentable] to rest.").

In the context of business methods, the broad dicta in *State Street* have reduced the historically separate subject matter requirement of section 101 to a mere "practical utility" determination. *State Street*, 149 F.3d at 1375 ("The question of whether a claim encompasses *statutory subject matter should* not *focus on* which of the four categories of subject matter a claim is directed to — process, machine, manufacture, or composition of matter — but rather on the essential characteristics of the subject matter, in particular, its *practical utility*.") (emphasis added).

The contrast in approach is clearly evident from this Court's precedent. In *Parker v. Flook*, for example, the case turned "entirely on the proper construction of § 101 of the Patent Act, which describes the subject matter that is eligible for patent protection." 437 U.S. at 588. Whether subject matter is eligible for patenting is an entirely separate inquiry from whether the claimed invention provides some useful result, i.e., whether it meets the separate utility requirement of section 101. *See id.*

No decision of this Court supports the broad proposition that merely because a method yields a useful result it should *ipso facto* be eligible for patenting, as is the current standard applied by the Federal Circuit. Rather, this Court has

recognized that the utility requirement of 35 U.S.C. § 101 is a distinct and separate test from the eligibility requirement of section 101. A mere "useful result" standard is much too lenient to determine whether subject matter is eligible for patenting. As Judge Rich so aptly stated decades ago, the diaper service (prior to the advent of disposable diapers) was undoubtedly one of the greatest business creations in its day, invaluable to countless individuals. However, despite its usefulness, the diaper service does not fall within one of the four enumerated categories of section 101. *See* Giles S. Rich, *Principles of Patentability*, 28 GEO. WASH. UNIV. L. REV. 393, 39394 (1960).

The standard espoused in *State Street* merely addresses the usefulness of the outcome. *See State Street*, 149 F.3d at 1375. This standard is at odds with the principles of patentability established by the Constitution and this Court and the ambit of patentable subject matter as established in the 1952 Patent Act. Ignoring the enumerated categories of statutory subject matter as a threshold inquiry of patentability makes the categories mere drafting protocols. *See Parker*, 437 U.S. at 590 (cautioning that a competent draftsmen could attach some post-solution activity to "transform an unpatentable principle into a patentable process" within section 101).

Although *State Street* purported to quote from *Diehr* that "anything under the sun made by man is patentable," that quote was taken out of context. *State Street*, 149 F.3d at 1373. Congressional reports employed that phrase only with respect to machines and manufactures. *See* S. REP. No. 82-1979, at 2399 (1952) ("A person may have 'invented' a machine or a manufacture, which may include anything under the sun that is made by man, but it is not necessarily patentable under section 101 unless the conditions of the title are fulfilled."); H. R. REP. No. 82-1923 (1952) (same). Certainly, section 101 does not say "anything under the sun made by man" is patentable subject matter, but rather references four specific categories.

Acquiescing to the demands of patent applicants and the *State Street* dicta, the USPTO has now dramatically changed course as well. Thus, for example, the USPTO recently promulgated "interim guidelines" stating that an invention need not lie within the "technological arts" to be patented. *Official Gazette of the United States Patent and Trademark Office*, 1300 O.G. 142, No. 4 (Nov. 22, 2005).[12]

Issued patents from such diverse areas as architecture, athletics, insurance, painting, psychology, and the law itself, reveal just how far afield the patent system has gone in granting patents in virtually any area of human endeavor, such as teaching a golf putting stroke or a method for lifting a box.[13]

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[12] In reaction to the sweeping impact of *State Street*, Congress passed the First Inventor Defense Act of 1999, i.e., 35 U.S.C. § 273, to provide a defense to infringement of a business method patent if the accused infringer "had, acting in good faith, actually reduced the subject matter to practice at least 1 year before the effective filing date of such patent, and commercially used the subject matter before the effective filing date of such patent." First Inventor Defense Act of 1999, Pub. L. No. 106-113, 113 Stat. 1536 (codified as amended at 35 U.S.C. § 273 (2000)). Beyond that limited purpose, there is nothing in the legislative history to suggest Congress intended to make any other changes to the United States patent laws. Thus, this Court's precedent on section 101 patent eligibility for business methods — as articulated in the *Gottschalk-Parker-Diehr* trilogy — remains the controlling standard.

[13] *See, e.g.*, U.S. Patents Nos. 5,498,162 ("Method For Demonstrating a Lifting Technique"), 6,447,403 ("Method and Apparatus for Improving Putting Skill"), 6,912,510 ("Methods of Exchanging an Obligation"), 5,190,458 ("Character Assessment Method"), and 5,809,484 ("Method and Apparatus For Funding Education By Acquiring Shares of Students Future Earnings").

III. NO SOUND INNOVATION POLICY SUPPORTS PATENTS ON NON-TECHNOLOGICAL METHODS OF DOING BUSINESS

Not only is an unrestricted sense of patentable subject matter disfavored by sound innovation policy, it conflicts with the requirement, stipulated by the Constitution and consistently articulated by this Court's precedent, that patentable subject matter must fall within the "useful arts."

A. Patent-Based Incentives Are Not Needed To Spur Business Method Innovation

The decision to issue patents on particular subject matter involves, in the words of Thomas Jefferson, a determination of those "'things which are worth to the public the embarrassment of an exclusive patent . . . .'" *Graham v. John Deere Co.*, 383 U.S. 1, 9 (1966).

In this regard, the evidence suggesting a sudden need for patent-based incentives to promote the development of business concepts is conspicuous by its absence. "Nowhere in the substantial literature on innovation is there a statement that the United States economy suffers from a lack of innovation in methods of doing business. Compared with the business practices of comparable economies we seem to be innovators . . . ." Leo J. Raskind, *The State Street Bank Decision: The Bad Business of Unlimited Patent Protection for Methods of Doing Business*, 10 FORDHAM INTELL. PROP., MEDIA & ENT. L.J. 61, 92 (1999). Among the reasons for the persistent favorable record of commercial entrepreneurship in the United States are existing federal and state regimes, including unfair competition law, trade secrets, copyright, and the misappropriation doctrine, that have long policed free riding and allowed business pioneers to reap the rewards of their ideas. *See id.* at 93. In conjunction with market-based

incentives, including the desire to seize first-mover and learning-curve advantages, the current legal framework has resulted in a flourishing environment for business innovation in the United States. No plausible argument supports the view that protecting non-technological business methods through our patent system is needed to solve a market failure problem, fill a legal void, or ultimately enhance social welfare.

B. Business Method Patenting Raises Significant Competitive Concerns

Although no convincing justification exists for allowing patents on non-technological methods of doing business and other abstract ideas, the breadth of coverage of such patents has raised significant competitive concerns. Among them is that such patents are not restricted by the Constitution and the precedent articulated by this Court. Rather, they may effectively appropriate all possible solutions to a particular problem. This direct restraint upon the ability of competitors to develop alternatives to the patented invention thwarts a principal aspiration of the patent system, fostering new alternatives. *See Slimfold Mfg. Co. v. Kinkead Indus., Inc.*, 932 F.2d 1453, 1457 (Fed. Cir. 1991) ("Designing around patents is, in fact, one of the ways in which the patent system works to the advantage of the public in promoting progress in the useful arts, its constitutional purpose."); *Brenner v. Manson*, 383 U.S. 519, 534 (1966) ("Until [a] process claim has been reduced to production of a product shown to be useful, the metes and bounds of that monopoly are not capable of precise delineation. It may engross a vast, unknown, and perhaps unknowable area.").

Consider, for example, the ubiquitous automated teller machine ("ATM"). A review of the patent rolls reveals numerous ATM patents concerning such mechanical, electrical, and computer-implemented inventions as card

readers, touch screens, cash dispensers, statement printers, and antitheft mechanisms. As evidenced by the robust competition within the contemporary ATM industry, such patents have both preserved the incentives of industry participants to innovate, yet allowed their competitors to market alternative designs. However, in view of the Federal Circuit's endorsement of patents on inchoate business methods, a contemporary inventor's claim to the very concept of an ATM would be considered eligible for patenting under section 101. Much like claim 8 of Morse's telegraphy patent, such a patent would effectively prevent all others from designing alternative mechanisms for meeting the same marketplace needs. The potential adverse impact of this hypothetical patent upon competition not just in the ATM industry, but within the banking industry itself, is apparent.

The lack of a plausible justification for patents on abstract business methods and human behavior, coupled with the anticompetitive consequences of issuing these patents, counsels that this Court continue to restrict patentable subject matter to instantiated products and processes. Modern society's dizzying pace of technological change, with its accompanying changes to marketplace conditions and commercial practices, should by no means lead to an alteration of these established principles.

Nor does this Court's recognition that the patent system should keep apace with unforeseeable fields of scientific or technological discovery, *see Chakrabarty*, 447 U.S. at 315-16, compel a contrary result. Abstract business concepts are not an unforeseeable field, and, in fact, they long predate the patent system. *See, e.g.*, John R. Thomas, *The Patenting of the Liberal Professions*, 40 B.C. L. Rev. 1139, 1145-46 (1999). Moreover, by definition, abstract or inchoate business methods are not scientific or technological. *See* Malla Pollack, *The Multiple Unconstitutionality of Business Method*

Patents: Common Sense, Congressional Consideration, and Constitutional History, 28 RUTGERS COMP. & TECH. L.J. 61, 77-78 (2002).

In *State Street*, the Federal Circuit articulated broad-sweeping dicta without making an inquiry into whether the patenting of inchoate methods of doing business raises competitive concerns and whether traditional patent-based incentives were actually needed to spur methods of doing business. "Jefferson saw clearly the difficulty in 'drawing a line between the things which are worth to the public the embarrassment of an exclusive patent, and those which are not.'" *Graham*, 383 U.S. at 9. This Court should return the ambit of patentable subject matter to that range of innovation which truly justifies tolerating the "embarrassment of an exclusive patent."

CONCLUSION

Should the Court decide to address the issues of subject matter eligibility for business methods, for all the foregoing reasons, the Court should hold that patentable subject matter under section 101 is restricted to inventions that involve technological contributions — namely, tangible products or processes that either (i) are tied to a particular machine or apparatus or (ii) cause transformation or reduction of an article to a different state or thing, and in either instance produce technologically beneficial results.

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